U.S. Department of the Interior
Bureau of Land Management

# Greater Mooses Tooth 2 Oil and Gas Development

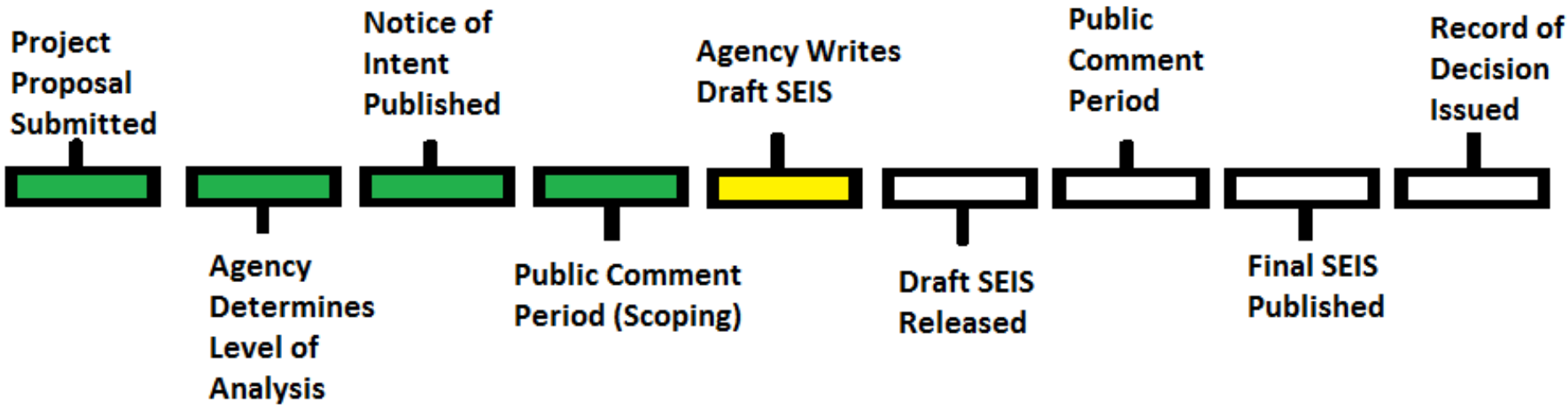
Project Update and Air Quality Presentation, July 28, 2017, Stephanie Rice

# Overview

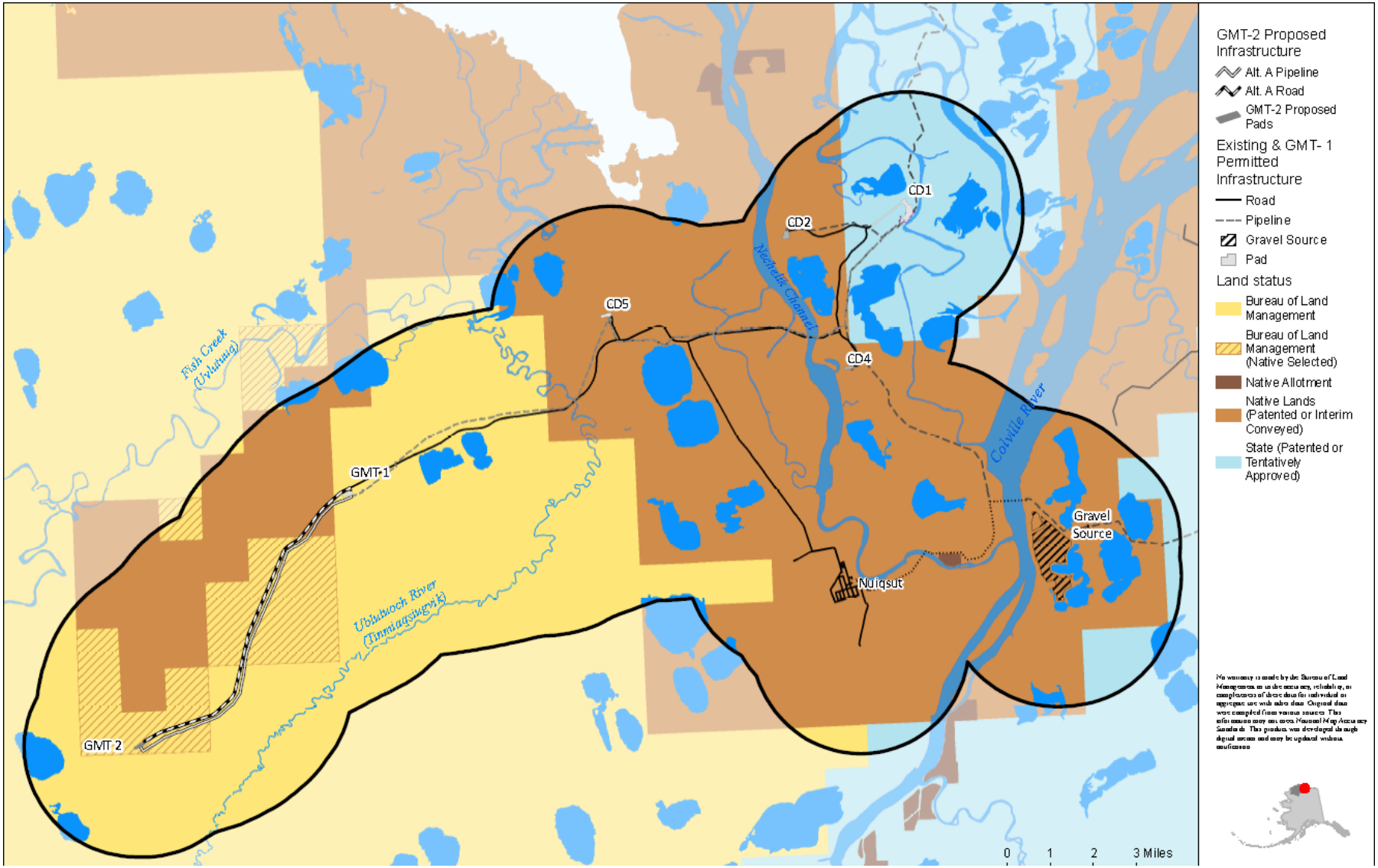
- Status of GMT2 Project
  - NEPA Process Overview
  - Review of GMT2 Project Alternatives
- Air Quality Impacts
  - Air Quality Standards
  - Air Quality Modeling
  - Air Quality Modeling for GMT2
  - Results of GMT1 Air Quality Modeling
  - Community Health in Nuiqsut

# GMT2 Supplemental Environmental Impact Statement

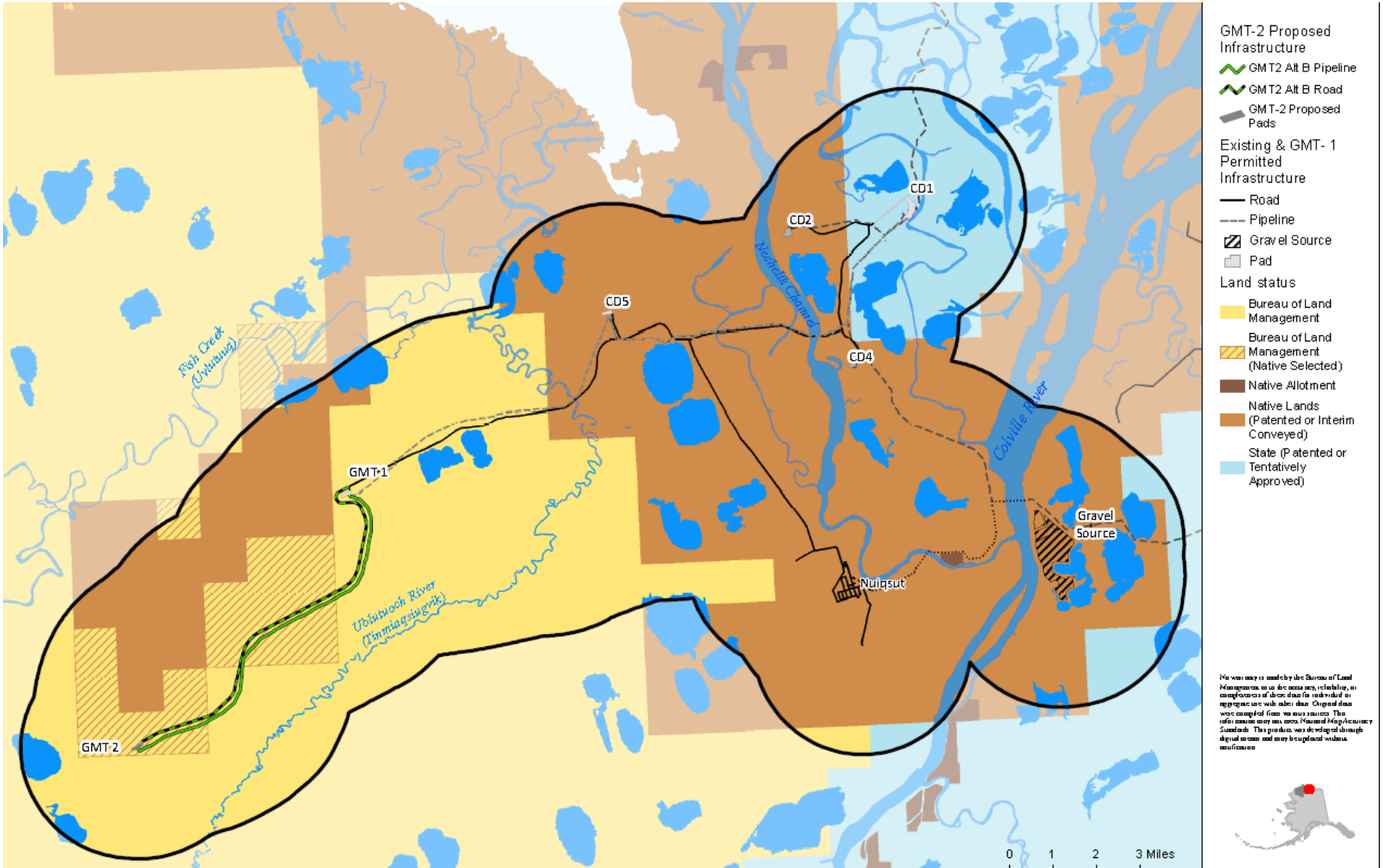
- The BLM has developed project alternatives and is currently analyzing the environmental impacts of those alternatives
- The Draft SEIS is tentatively scheduled for release in November, and will have a 60 day public comment period



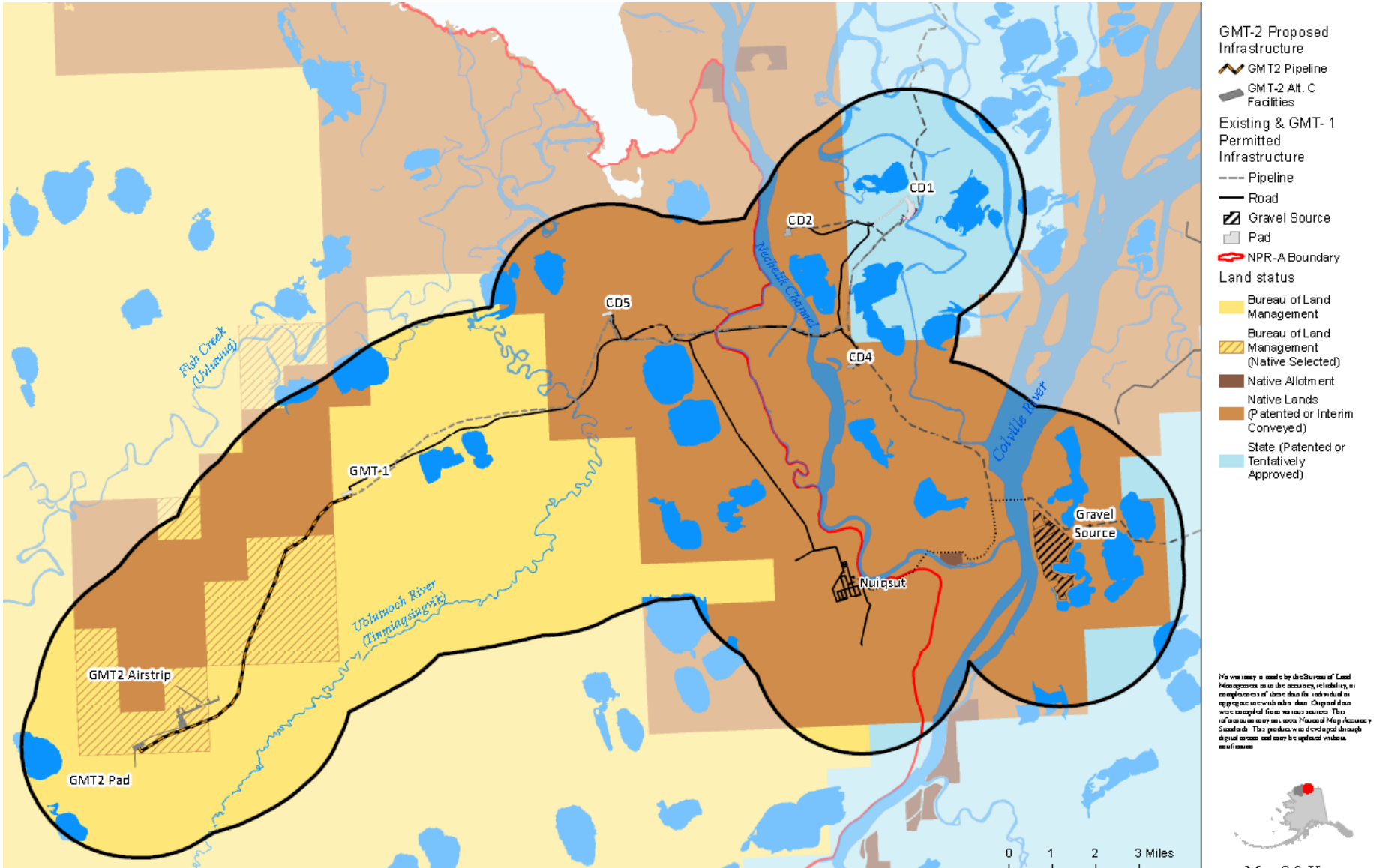
# Alternative A: ConocoPhillips' Proposal



# Alternative B: Alternate Road Alignment



# Alternative C: Roadless Development

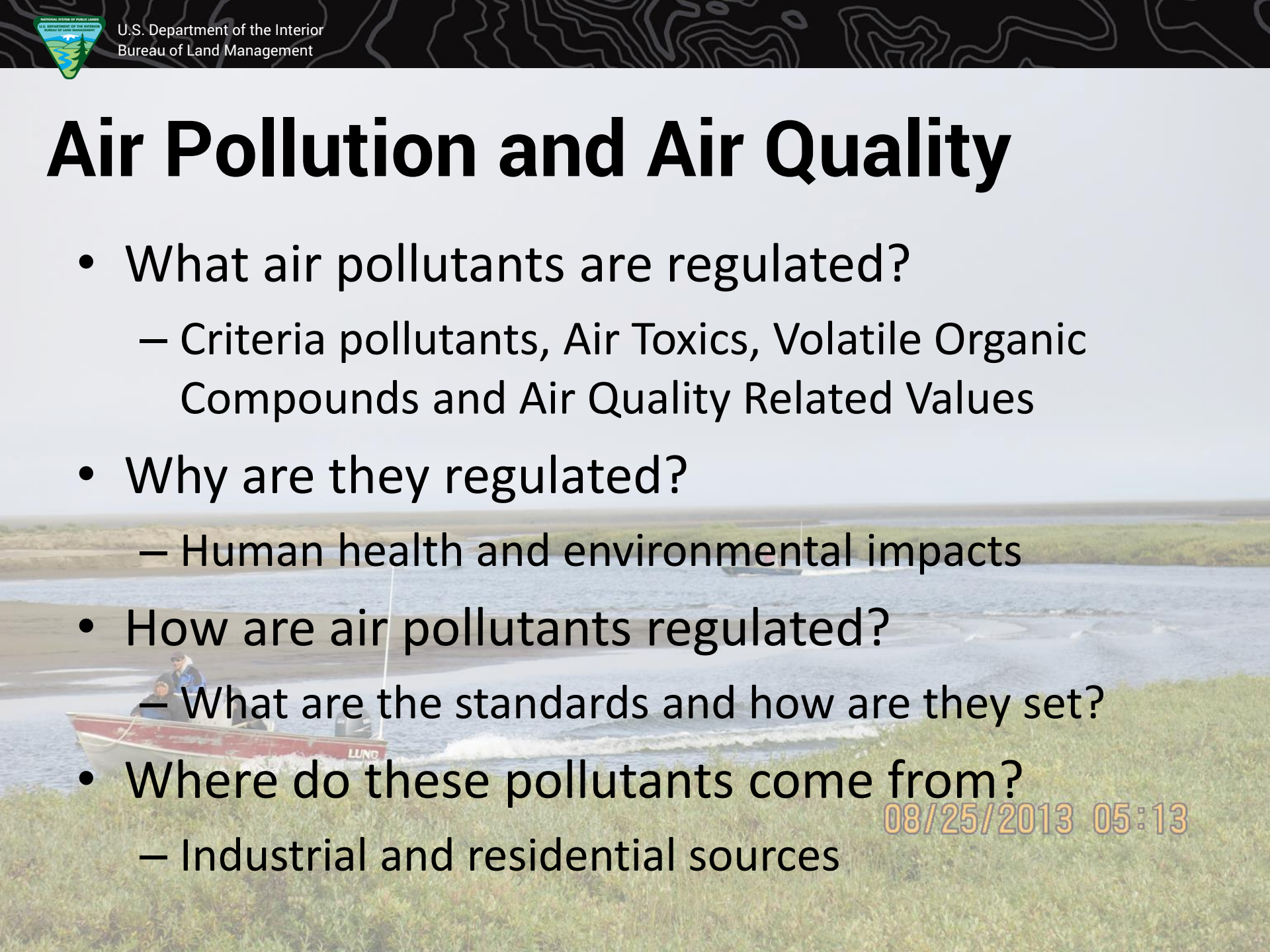


# Features Common to All Action Alternatives

- 14 acre drill pad with up to 48 wells
- A pipeline connecting the GMT2 drill pad with permitted GMT1 infrastructure
- No bridges will be constructed as part of any alternative for GMT2
- All action alternatives will use the same construction schedules
  - Two or three season construction schedule

# Air Pollution and Air Quality

- What air pollutants are regulated?
  - Criteria pollutants, Air Toxics, Volatile Organic Compounds and Air Quality Related Values
- Why are they regulated?
  - Human health and environmental impacts
- How are air pollutants regulated?
  - What are the standards and how are they set?
- Where do these pollutants come from?
  - Industrial and residential sources



# Air Quality Standards: Criteria Pollutants


- Carbon Monoxide
- Particulate Matter
- Ground-level Ozone
- Sulfur Dioxide
- Nitrogen Dioxide
- Lead

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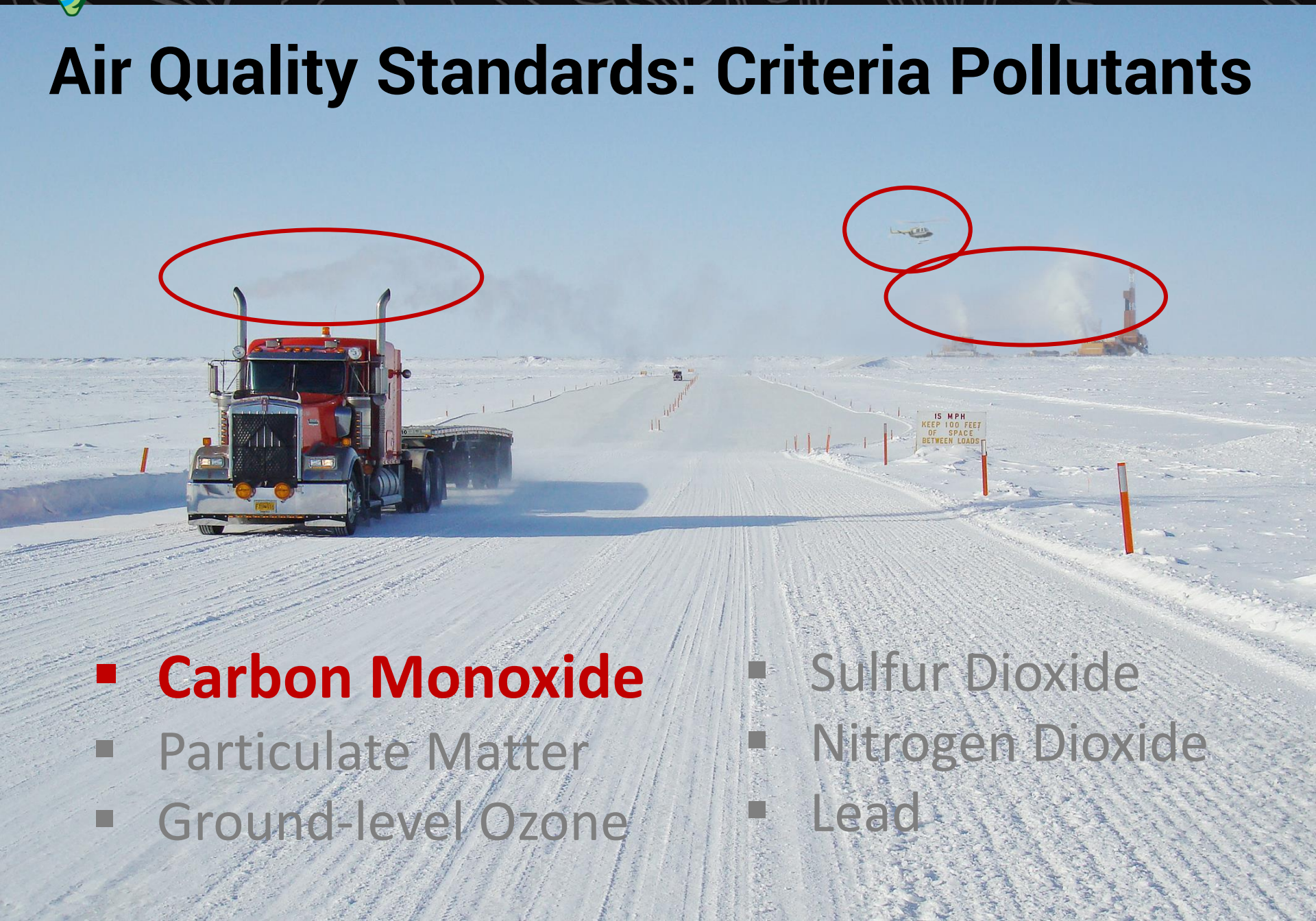


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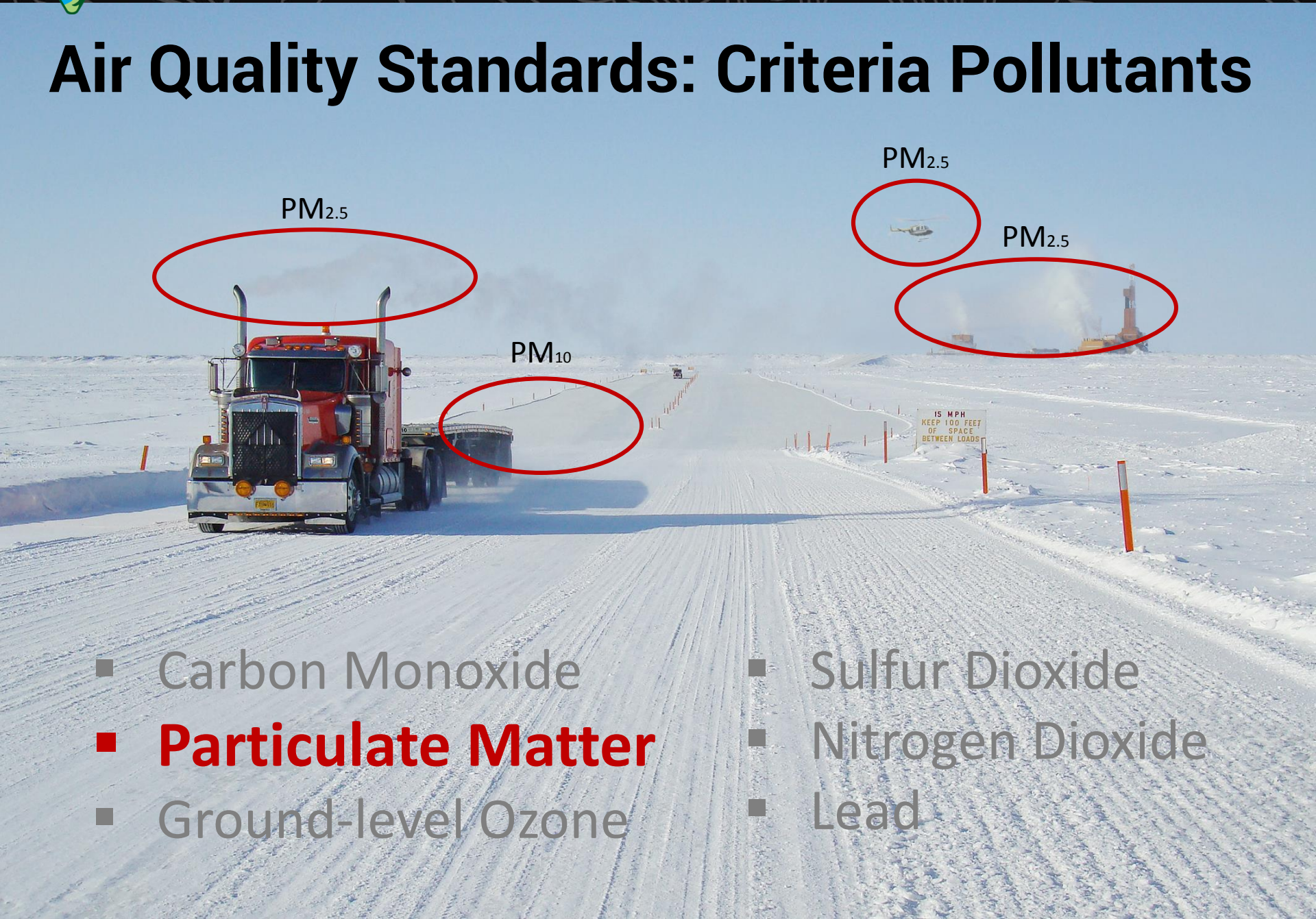


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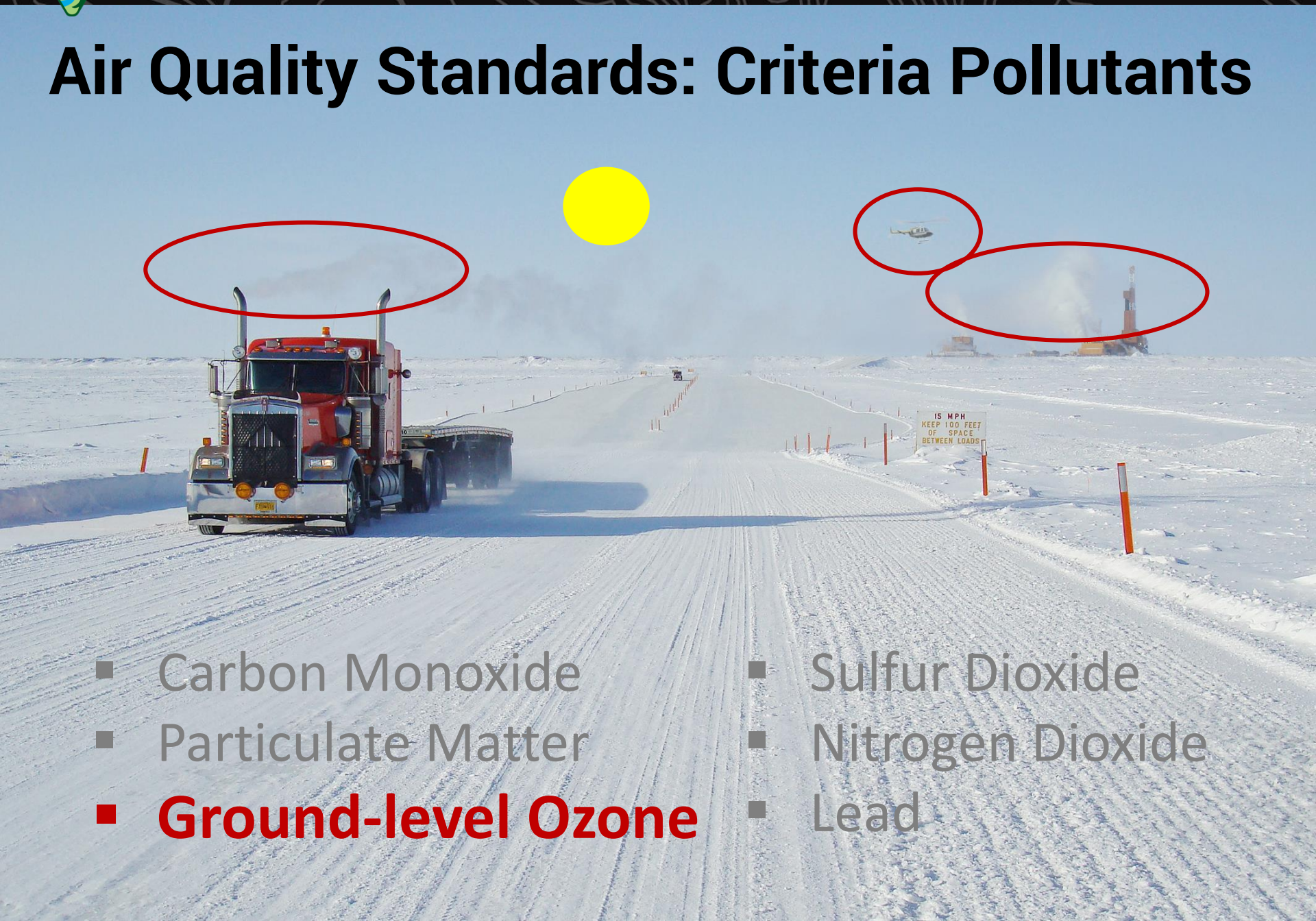


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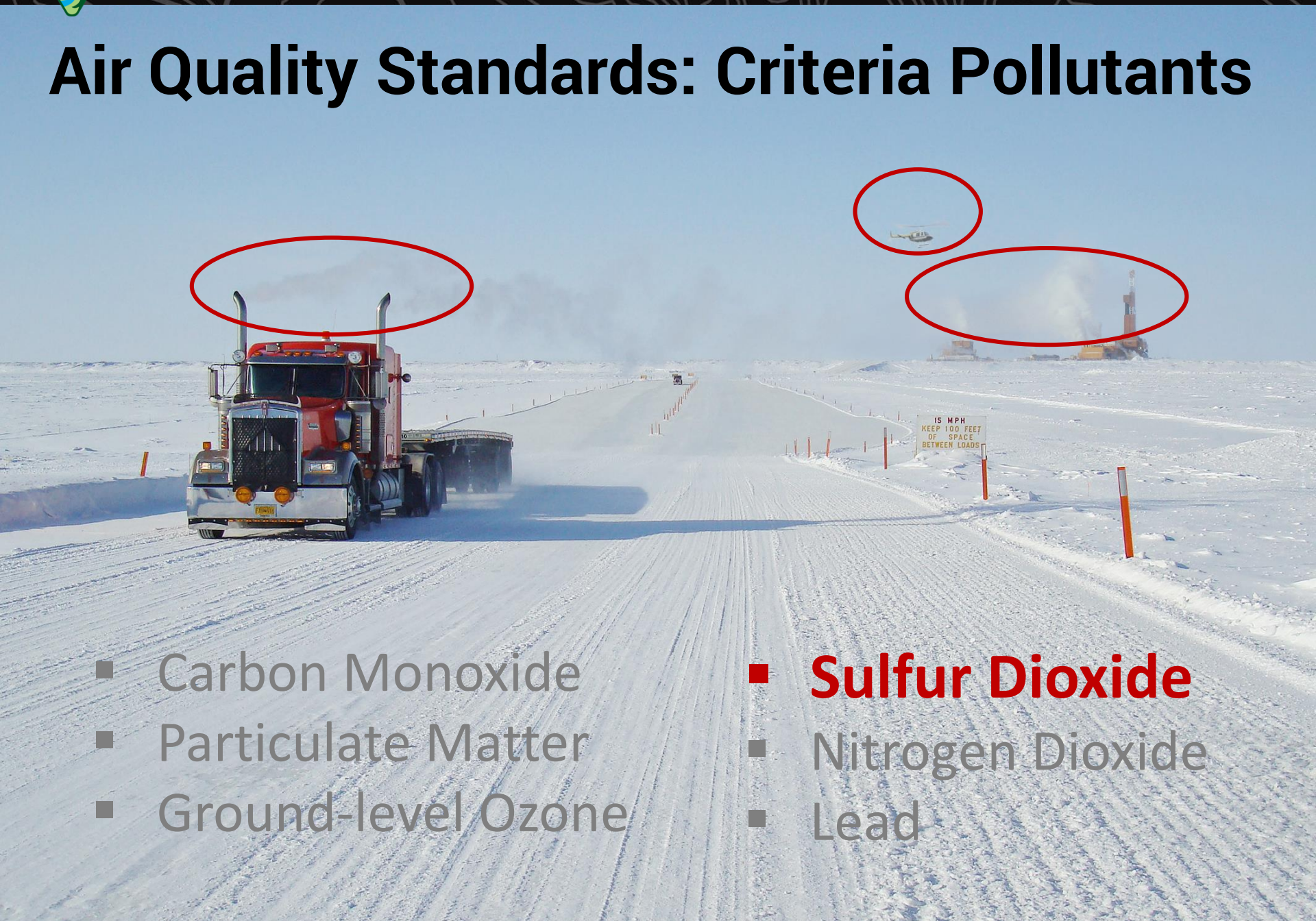


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# Air Quality Standards: Air Toxics

# Air Quality Standards: Volatile Organic Compounds

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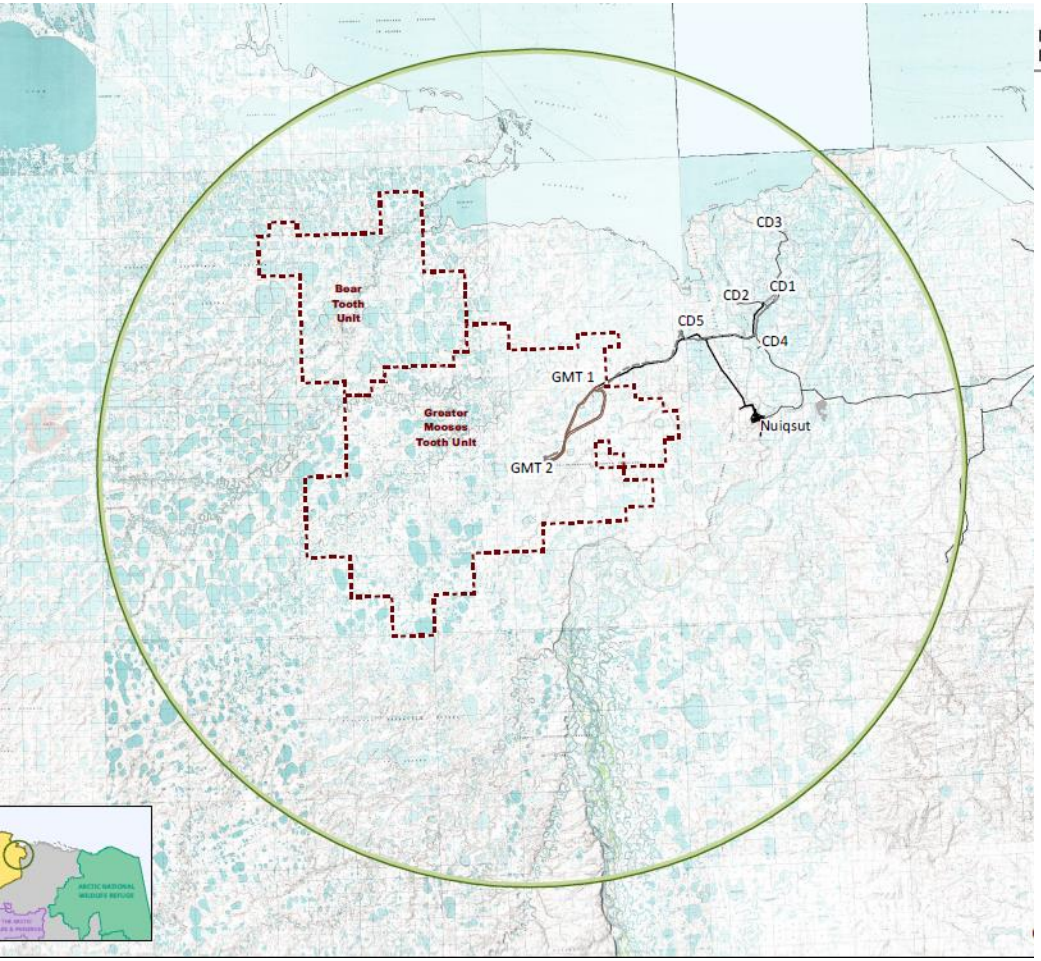
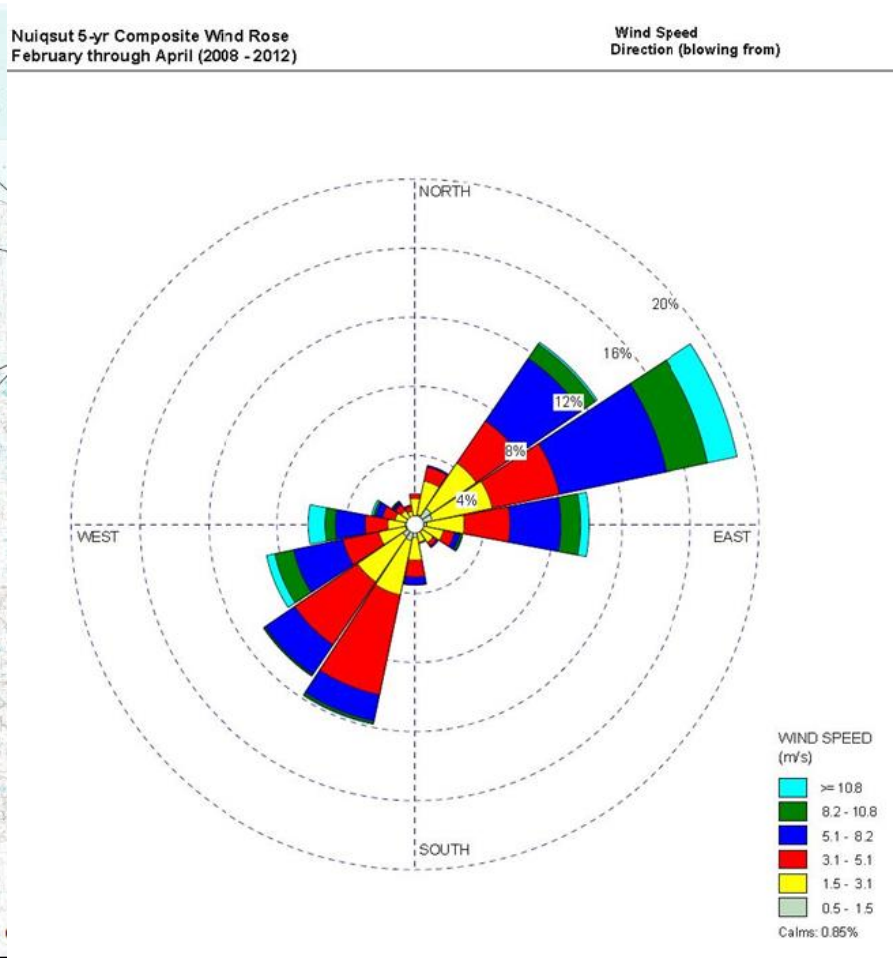
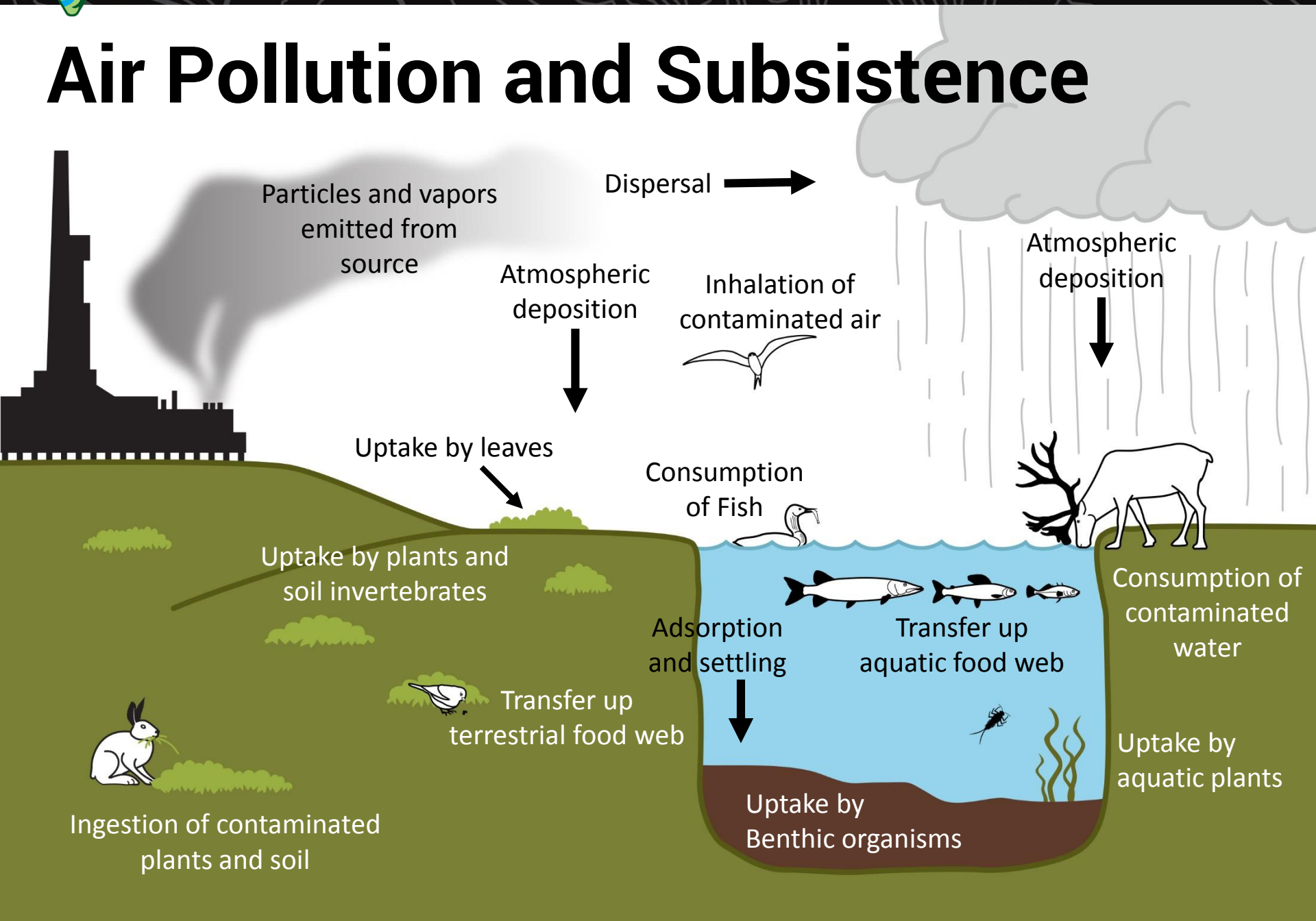
# Air Quality Standards: Visibility and Deposition

# Air Pollutant Transport



# Air Pollution and Subsistence



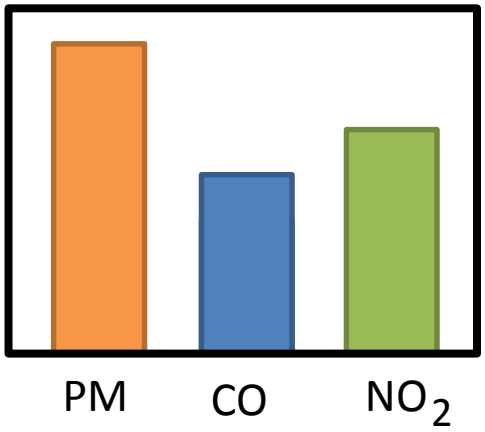
# Air Quality Modeling

Weather and Monitoring Data →

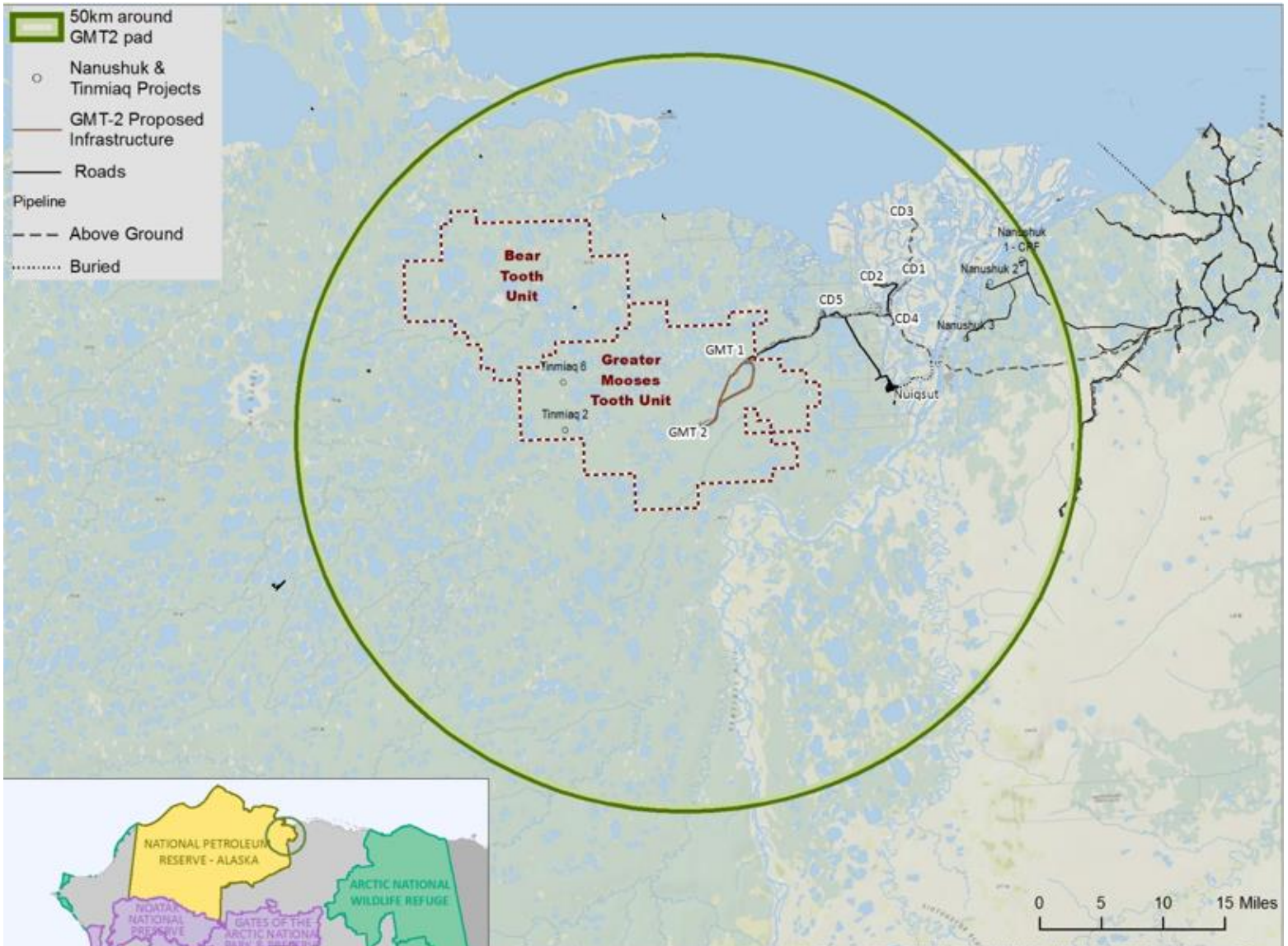
Modeling Protocol →

Emissions Inventory →

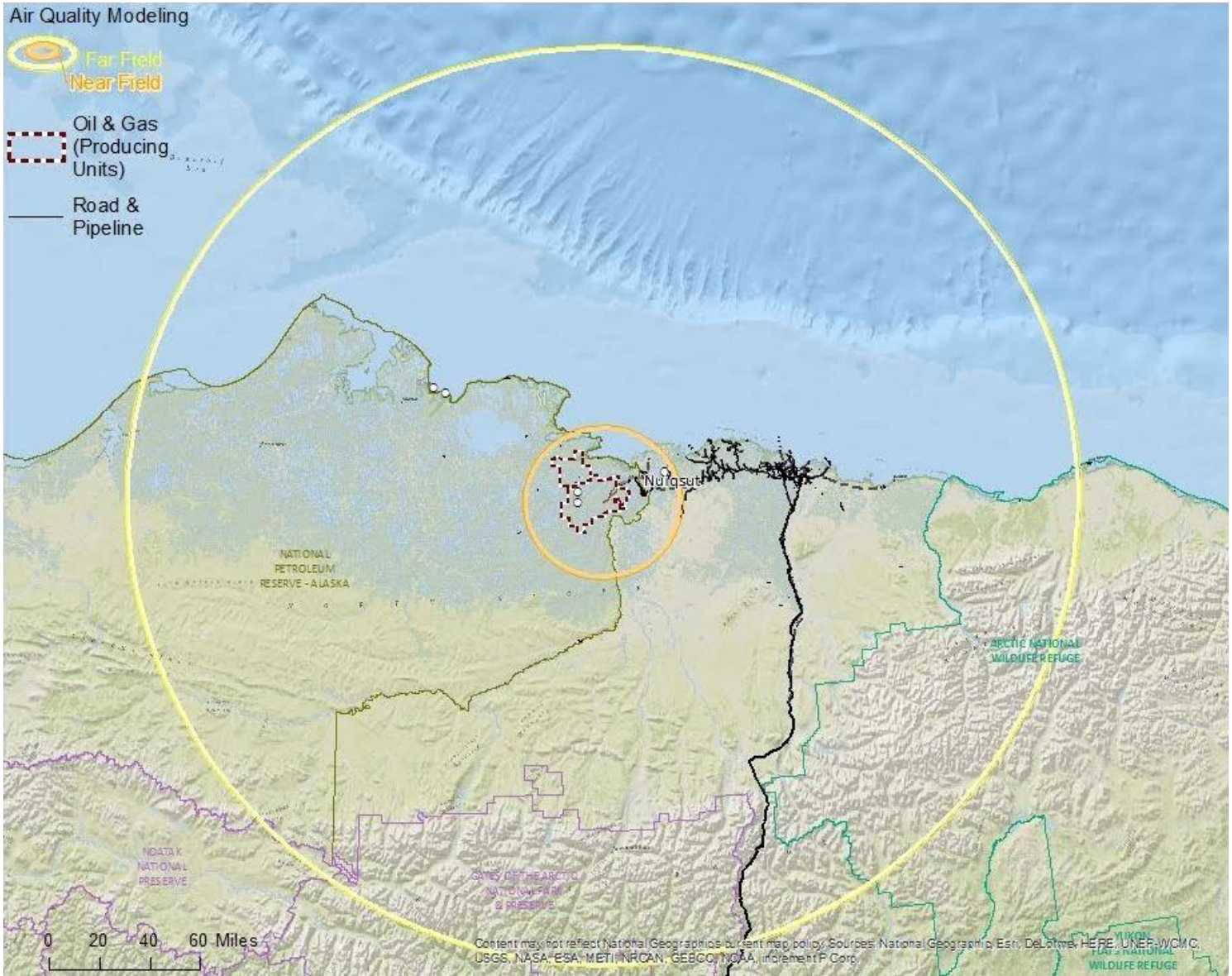
→ Predictions of Impact



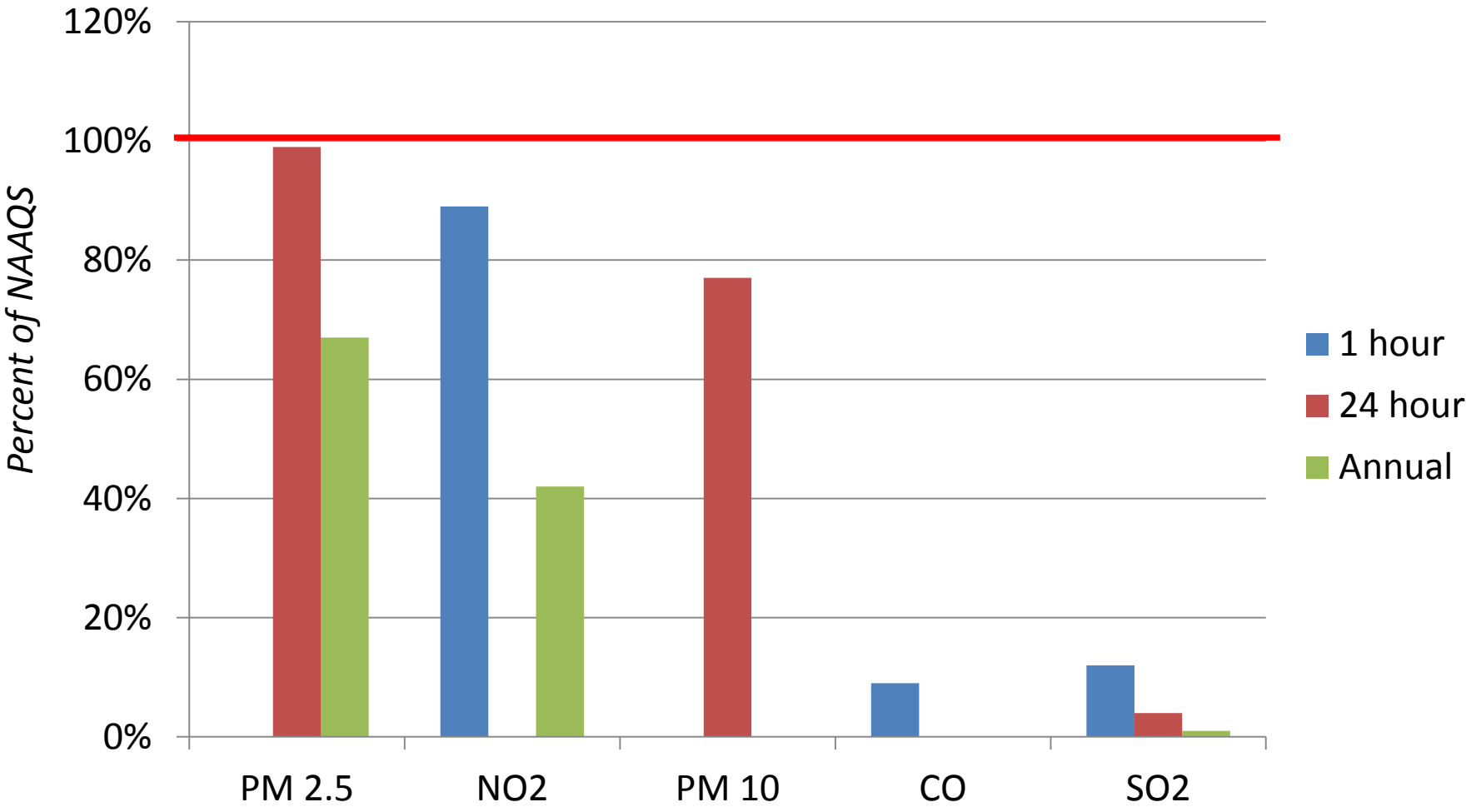
# Air Quality Modeling for GMT2



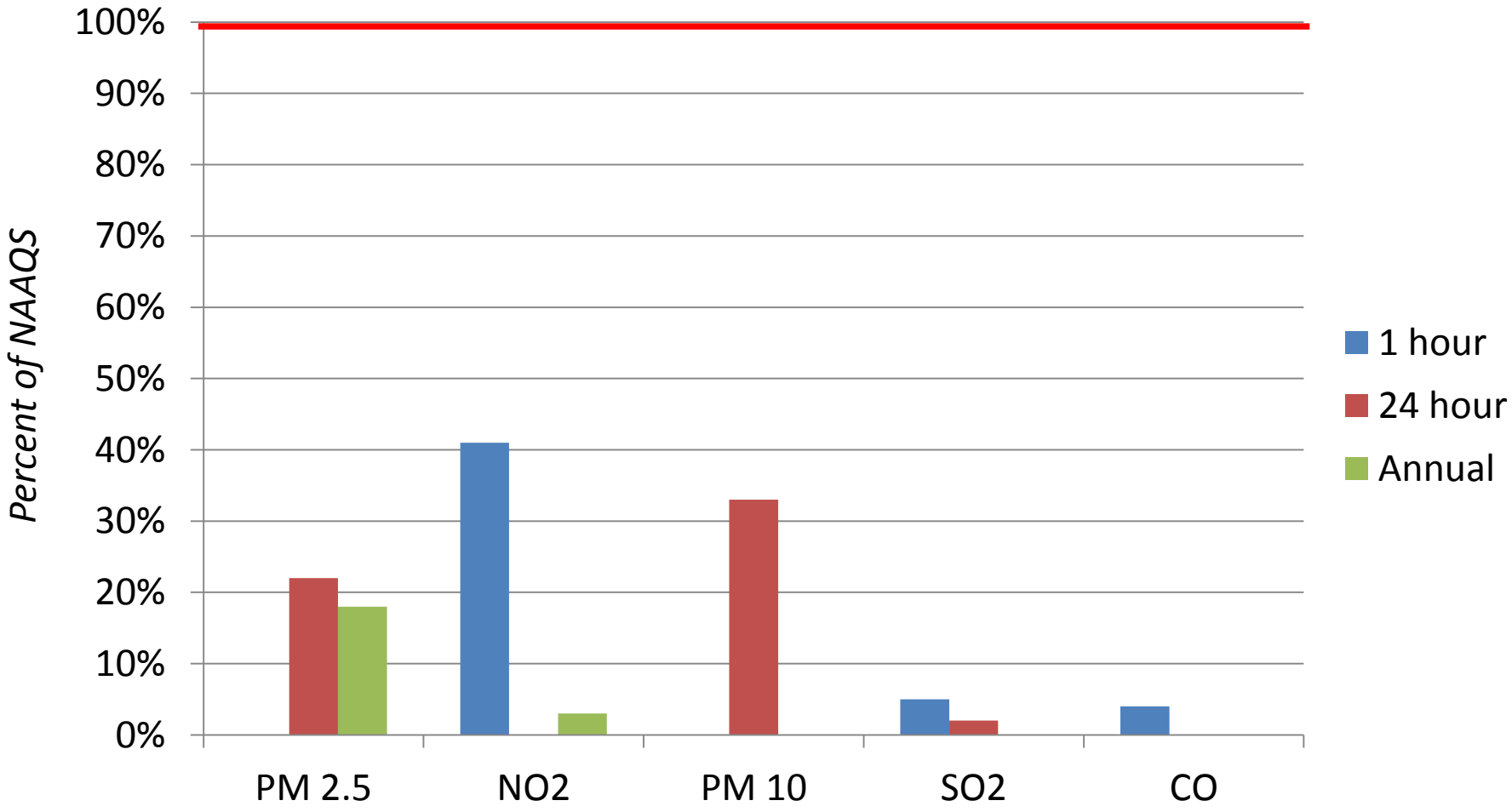
# GMT1 Air Quality Modeling



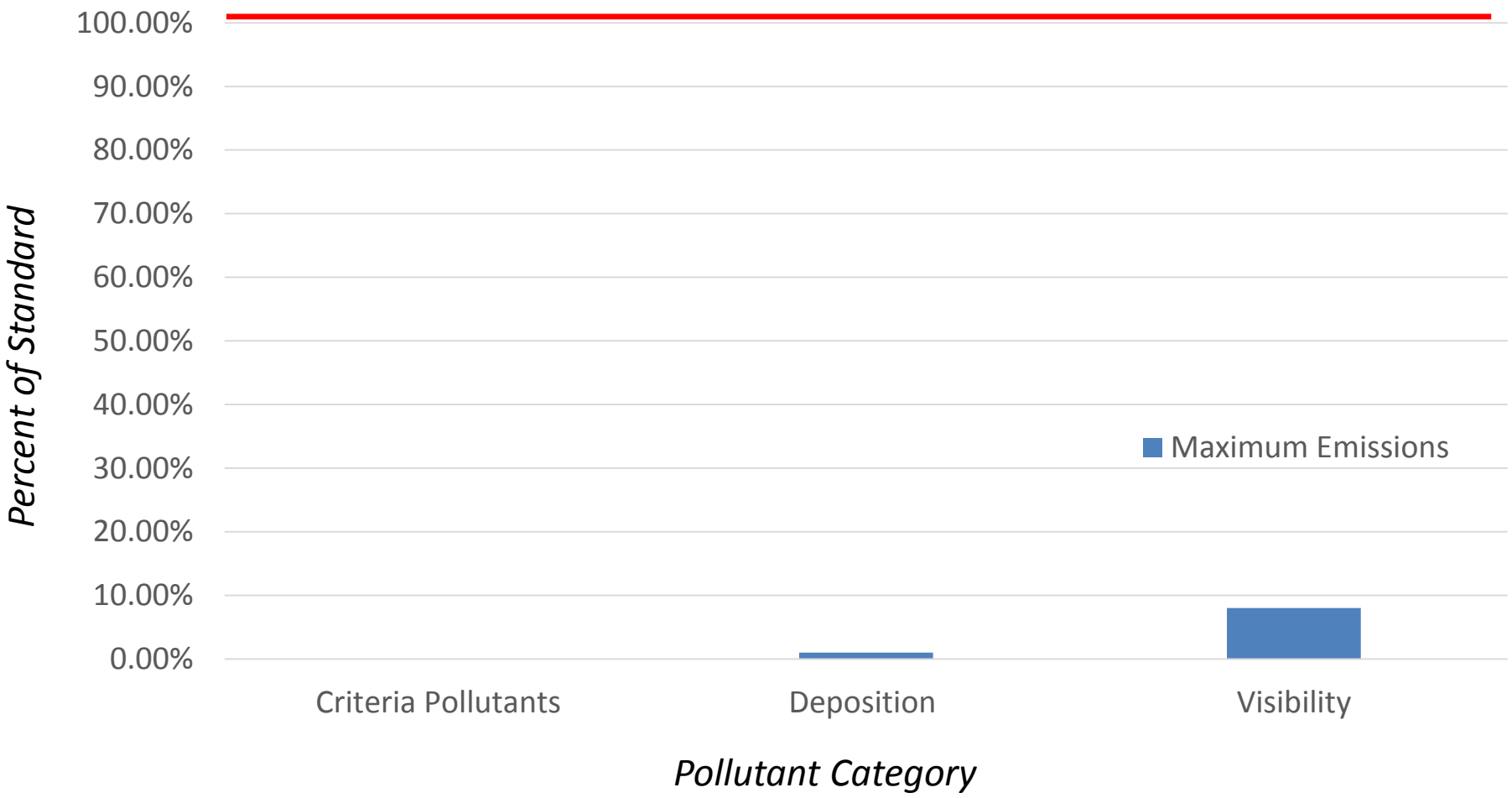
# Maximum Predicted Air Quality Impacts from GMT1 Project at the Pad Edge



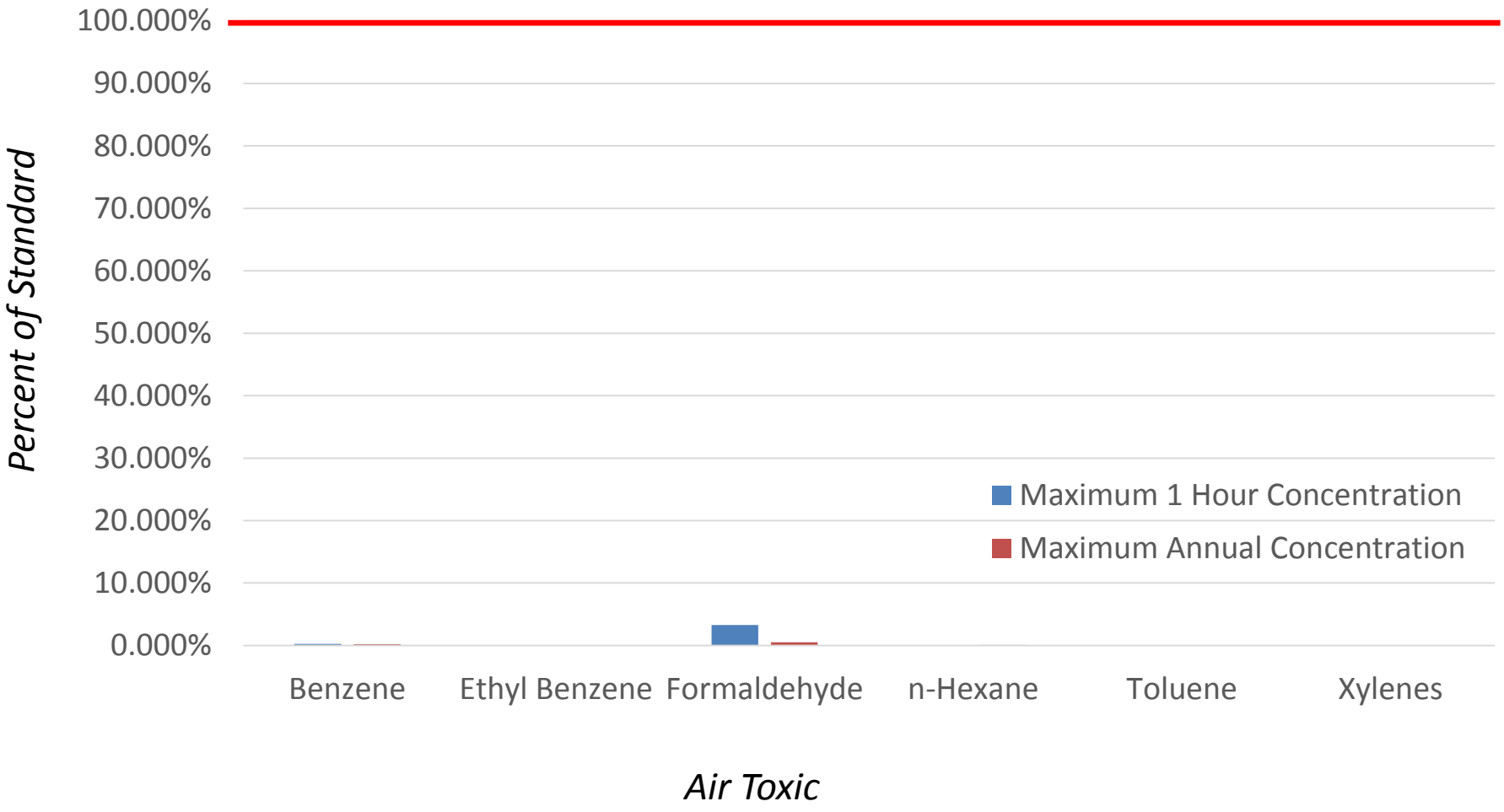
# Maximum Predicted Air Quality Impacts from GMT1 Project at the Village of Nuiqsut



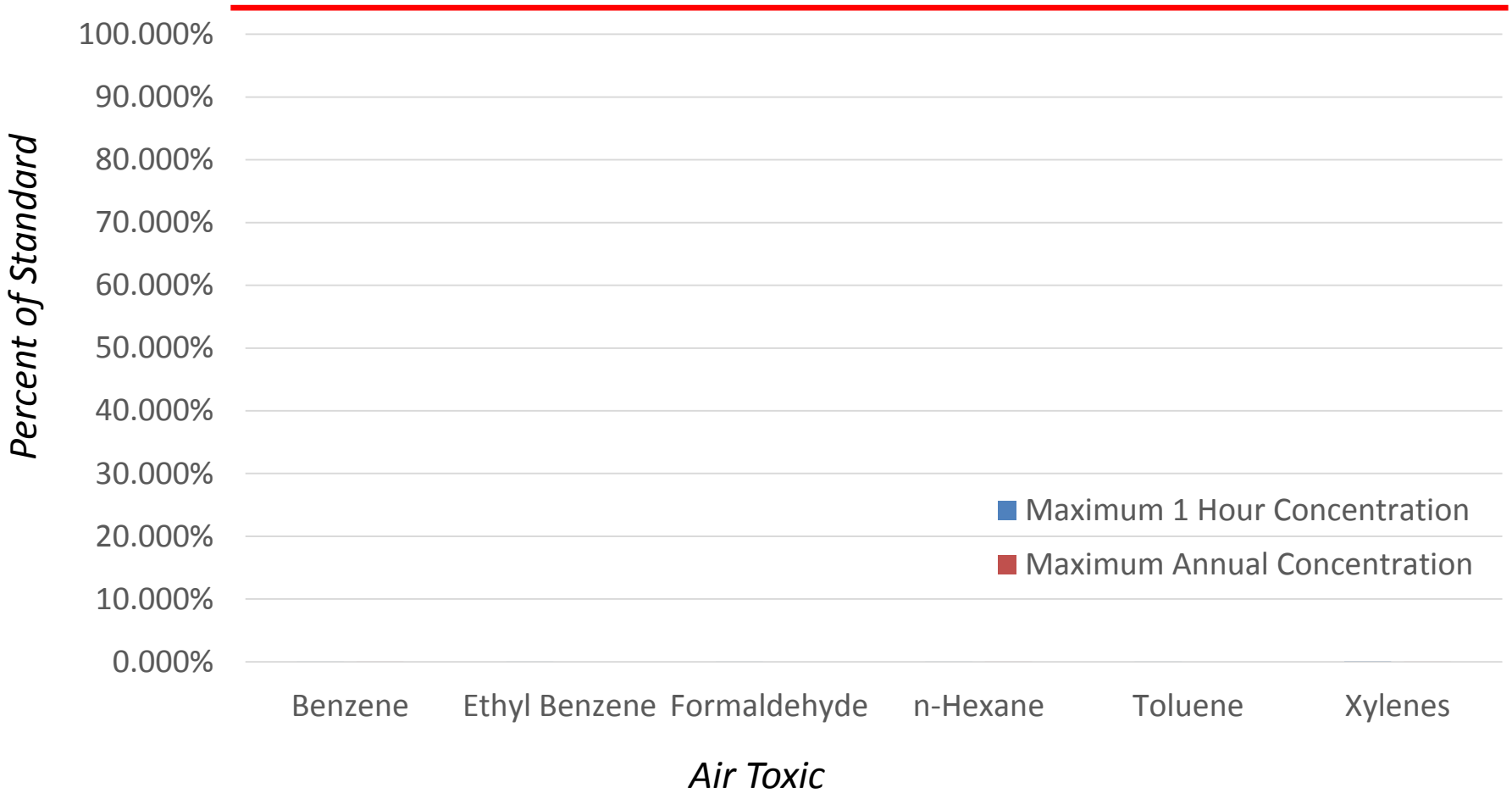
# Maximum Predicted Impacts from GMT1 Project at ANWR



# Maximum Predicted Concentrations of Air Toxics at GMT1 Pad Edge



# Maximum Predicted Concentrations of Air Toxics in Nuiqsut During GMT1 Project

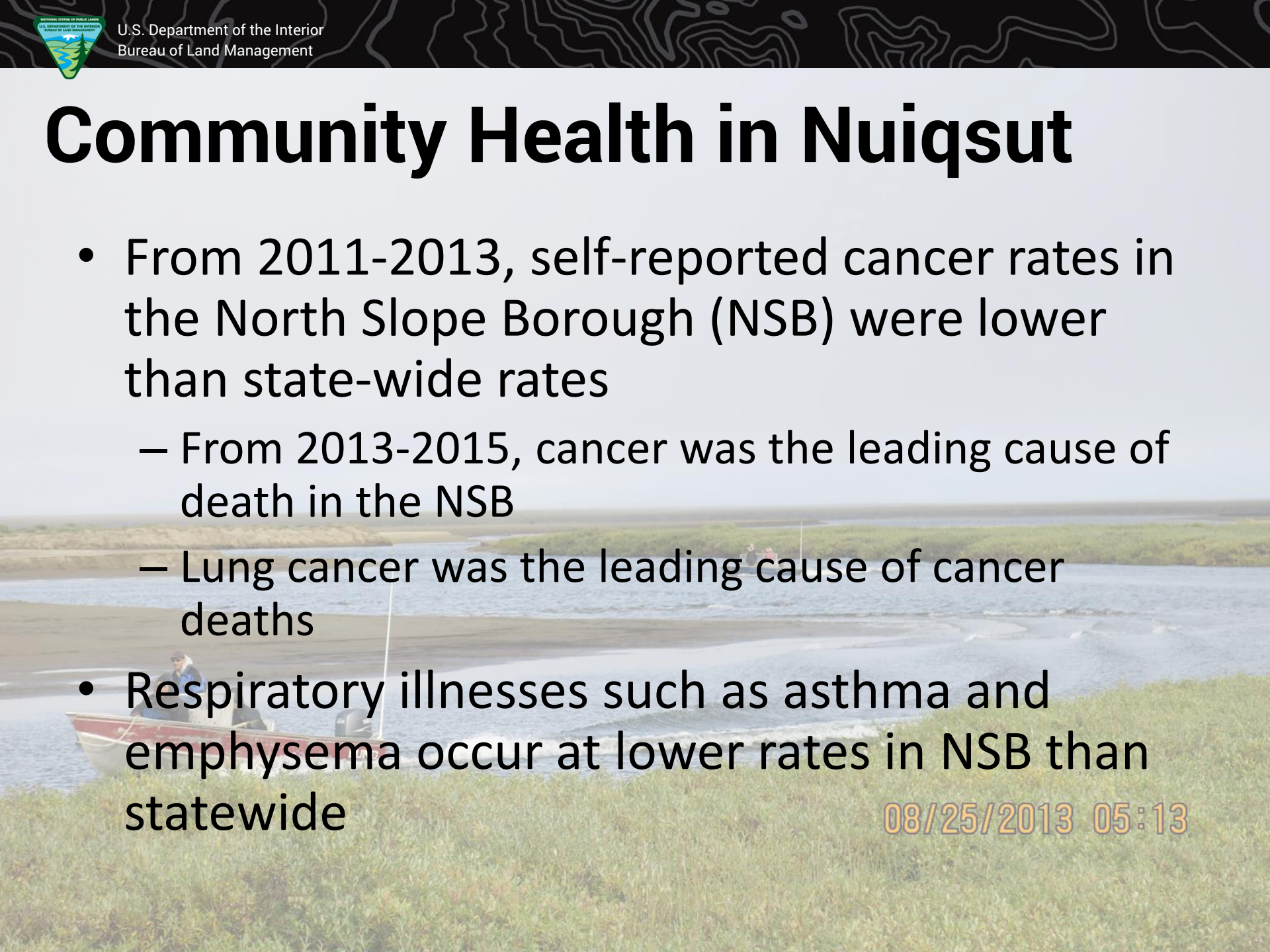


# GMT1: Cancer Risk Associated with Inhalation of Air Toxics

- Cancer risk as a result of air toxics emitted from development near Nuiqsut was less than one in one million
  - This means that if 1 million people lived in Nuiqsut, one of them might develop cancer as a result of inhaling air toxics

# Community Health in Nuiqsut

- From 2011-2013, self-reported cancer rates in the North Slope Borough (NSB) were lower than state-wide rates
  - From 2013-2015, cancer was the leading cause of death in the NSB
  - Lung cancer was the leading cause of cancer deaths
- Respiratory illnesses such as asthma and emphysema occur at lower rates in NSB than statewide



# What Causes Respiratory Diseases?


# What Does the BLM do to Protect Air Quality?

- The BLM can only control actions taken by permittees, and only in specific circumstances
  - Permittees must comply with their lease stipulations BLM Best Management Practices
- There must be a finding of significant impact in order for the BLM to require mitigation
  - If a model predicts an exceedance of an air quality standard, the BLM may impose mitigation measures

# Questions?